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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/076,330

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Francois Martin

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06/29/2005

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

TRAN, KHANH C

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/076,330

Applicant(s)

MARTIN, FRANCOIS

Examiner

Khanh Tran

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/03/02:02/15/02.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The drawings are objected to because "the unlabeled rectangular boxes shown in the drawings should be provided with descriptive text labels". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The abstract of the disclosure is objected to because "Application: transmitter/generator of TV program mosaic" and "Fig. 5" should be deleted from the Abstract. Correction is required. See MPEP § 608.01(b).

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

- (I) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 7-9, 11-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Rosengren et al. U.S. Patent 5,633,683.

Regarding claim 1, Rosengren et al. invention is directed to a transmitter and method for transmitting video signals.

In column 2, line 60 via column 3 line 25, figure 1 illustrates a transmitter according to the invention. The transmitter may be located at the head-end of a cable network. The transmitter outputs transport stream (TS) according to a group of video signals V1, V2, and V3.

Referring to figure 1, the video signals V1, V2, and V3 are applied to MPEG2 video encoders 2, 3 and 4, corresponding to the claimed first group of coding means, for supplying elementary bit streams E1, E2 and E3.

The video signals V1, V2, and V3 are further applied to a composing circuit 1 which comprises, for each video signal, horizontal and vertical sub-

samplers 10, 11 and 12, corresponding to the claimed second group of coding means. Each sub-sampler generates a small-size sub-picture of the respective video picture. The sub-pictures are stored in respective sections of a picture memory 13 under control of a control circuit 14, which produces mosaic video signal Vm. The video signal Vm is applied to a further MPEG2 encoder 5 for encoding into a further elementary bit stream Em.

Rosengren et al. does not teach associating means for associating with each sub-sampled video signal from each input video signal.

In column 4, lines 62-67; in that embodiment, the mosaic picture is transmitted as a program comprising the elementary stream Em. Rosengren et al. teaches that the associated linking data is transmitted by using a descriptor in the program table. In view of that it would have been obvious for one of ordinary skill in the art at the time the invention was made that Rosengren et al. transmitter can be modified to include an associating means for associating a descriptor with each sub-sampled video signal. Motivation is that in column 10, lines 3-15, Rosengren et al. teaches that MPEG2 television signal includes elementary bitstream representing a mosaic picture, which comprises a plurality sub-pictures, each sub-picture representing one of the plurality of video signals, and linking data for linking each sub-picture within the mosaic picture with the video signal each sub-picture represents.

The transmitter further includes a multiplexer 6 for multiplexing elementary bit streams V1, V2, V3 and Vm into a transport stream TS.

Regarding claim 2, in column 3, lines 35-67; figure 3 illustrates another embodiment of a transmitter. In this embodiment, the video signals to be transmitted (e.g, E1, E2, E3, Em) are assumed to be already available. The transmitter receives transport stream TS1, corresponding to the claimed input video signal resulting from the multiplexing of a group of coded video signals, which corresponds to E1, E2, E3 as taught by Rosengren et al.,

MPEG elementary streams E1 E2 E3 are further applied to decoder means 16 17 18 for decoding the elementary streams and generating the respective sub-picture. decoder means 16 17 18 corresponds to the claimed transcoding means. Using analogous argument as discussed in claim 1, Rosengren et al. does not teach associating means for associating with each sub-sampled video signal from each input video signal.

In column 4, lines 62-67; in that embodiment, the mosaic picture is transmitted as a program comprising the elementary stream Em. Rosengren et al. teaches that the associated linking data is transmitted by using a descriptor in the program table. In view of that, it would have been obvious for one of ordinary skill in the art at the time the invention was made that Rosengren et al. transmitter can be modified to include an associating means for associating a descriptor with each sub-sampled video signal. Motivation is that in column 10, lines 3-15, Rosengren et al. teaches that MPEG2 television signal includes elementary bitstream representing a mosaic picture, which comprises a plurality sub-pictures, each sub-picture representing one of the plurality of video signals,

and linking data for linking each sub-picture within the mosaic picture with the video signal each sub-picture represents.

The transmitter in figure 3 further includes a multiplexer for multiplexing video E1, E2, E3, representative of the claimed input signal, with the elementary stream Em, representative of group of the sub-sampled video signals, to output a transport stream TS2.

Regarding claims 3 and 9, in column 8, lines 9-35, Rosengren et al. teaches a television receiver for receiving digital video signals, which have been transform-coded into elementary bitstreams, a plurality of bitstreams being multiplexed into transport stream, one of the bitstreams representing a mosaic picture comprising a plurality of sub-pictures, the bitstreams representing a mosaic picture, corresponding to the claimed auxiliary signal. The receiver comprising:

As shown in figure 7, a MOSAIC decoder 47 for receiving the elementary stream Em representing a mosaic picture comprising a plurality of sub-pictures.

Rosengren et al. does not expressly teach means for creating a database as set forth in the application. However, in column 8, lines 15-30, Rosengren et al. further teaches a data linking decoder for receiving and decoding data linking the position of each sub-picture of the mosaic picture with the video signal each sub-picture represents, and a controller for controlling the data linking decoder to obtain linking data and identifying the video signal linked with the selected sub-



picture. In view of that, it would have been obvious for one of ordinary skill in the art at the time the invention was made that by extracting sub-picture information and linking data, the controller and data linking decoder perform the equivalent function of the claimed means for creating a database. Motivation is that linking data and the video signal linked with the selected sub-picture are subsequently used to select a sub-picture from a displayed mosaic picture.

In column 8, lines 20-25, user-controlled pointing means for selecting a sub-picture from a displayed mosaic picture. In column 5, lines 40-60, see also figure 8, the microprocessor receives from the remote control unit a request to display the mosaic picture. If the mosaic picture is found to be available, the processor applies the PID of the mosaic elementary video stream to the demultiplexer. In view of that, the microprocessor corresponds to the claimed means for creating a mosaic.

Regarding claim 4, referring to figure 8,

In step 54, the microprocessor 45, shown in figure 7, derives the number of sub-pictures from the parameters `horizontal_partitioning` and `vertical_partitioning` in the program map table. Microprocessor 45 corresponds to the claimed means for de-multiplexing.

As recited in claim 3, decoder 47 for receiving the mosaic stream  $E_m$  and determining for each macroblock in the elementary stream  $E_m$  whether it belongs

to the sub-picture having the coordinates X, Y. The decoder 47 corresponds to the claimed means for decoding.

As recited in claim 3, the microprocessor receives from the remote control unit a request to display the mosaic picture. If the mosaic picture is found to be available, the processor applies the PID of the mosaic elementary video stream to the demultiplexer. In view of that, the microprocessor corresponds to the claimed means for creating a mosaic. The receiver displays the mosaic picture

Regarding claim 5, in column 5, lines 40-50, the remote control unit sends a request to display the mosaic picture. The remote control unit corresponds to the claimed request generator.

Regarding claim 7, referring to column 8, lines 20-25, Rosengren et al. further teaches that user-controlled pointing means for selecting a sub-picture from a displayed mosaic picture. The user-controlled pointing means corresponds to the claimed graphical selection means.

Regarding claim 8, in column 6, lines 45-65, the user sends a command to the channel navigation system informing it of the location of the corresponding sub-picture in the mosaic picture. The channel navigation system sends a request to the demultiplexer to select that program. The sub-picture corresponds to the claimed sub-sampled video signal and the program corresponds to the claimed corresponding

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decoded video signal. In view of that user-controlled pointing means corresponds to the claimed means for selecting a sub-sampled video signal as set forth in the application claim.

Regarding claim 11, claim 11 is rejected on the same ground as for claim 1 because of similar scope.

Regarding claim 12, claim 12 is rejected on the same ground as for claim 2 because of similar scope.

Regarding claim 13, claim 13 is rejected on the same ground as for claim 3 because of similar scope.

Regarding claim 14, claim 14 is rejected on the same ground as for claim 11 because of similar scope. Furthermore, as known to one of ordinary skill in the art, an average person in the art of computer programming can write a sequence of program code instructions for executing the steps of the procedure as claimed in claim 11 if the program is executed by a signal processor implemented in the transmitter. Motivation is for testing purposes and simulation.

Regarding claim 15, claim 15 is rejected on the same ground as for claim 12 because of similar scope. Furthermore, as known to one of ordinary skill in the art, an

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average person in the art of computer programming can write a sequence of program code instructions for executing the steps of the procedure as claimed in claim 12 if the program is executed by a signal processor implemented in the transmitter. Motivation is for testing purposes and simulation.

Regarding claim 16, claim 16 is rejected on the same ground as for claim 13 because of similar scope. Furthermore, as known to one of ordinary skill in the art, an average person in the art of computer programming can write a sequence of program code instructions for executing the steps of the procedure as claimed in claim 13 if the program is executed by a signal processor implemented in the transmitter. Motivation is for testing purposes and simulation.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosengren et al. U.S. Patent 5,633,683 as applied to claim 1 above, and further in view of Dureau et al. U.S. Patent 6,539,545.

Regarding claim 6, Rosengren et al. does not disclose the user request originates from the content of a user profile comprising a group of fileds.

Dureau et al. invention is directed to a system and method for the simultaneous transmission and rendition of multiple encoded digital video signal streams in an interactive television application. In column 13, lines 45-60, in one example, Dureau et al. teaches a commercial may include a number of sub-pictures each at fixed display location and the content of each display location would be selected by the end-user

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and/or by the receiver based on user profile comprising a group of fields. Because the user profile would determine the display location, it would have been obvious for one of ordinary skill in the art at the time of the invention that Rosengren et al. teachings can be modified to include a user profile. Motivation is as taught in Dureau et al. invention recited above.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosengren et al. U.S. Patent 5,633,683 as applied to claim 1 above, and further in view of Ito et al. U.S. Patent 6,377,309.

Regarding claim 10, claim 10 is rejected on the same ground as for claim 1 because of similar scope. Rosengren et al., however, does not teach the sub-pictures are coded in accordance with MPEG4-standard.

In column 3, lines 40-60, Ito et al. teaches in one embodiment that main information of TV broadcast is sent by efficiently multiplexing sound data including image and/or sound data in a predetermined field in the main information as sub information, and the receiving side receives and reproduces the main information and sub-information. As the data formats of the main information and sub-information, main information uses an MPEG2 data stream of digital TV broadcast, and the sub information uses an MPEG4 data stream which has been standardized in recent years and has very high transmission efficiency. Because the sub-pictures, representative of the mosaic picture, are sub-information, it would have been obvious for one of ordinary skill in the art at the time of the invention that Rosengren et al. teachings can be

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modified to encode the sub-pictures in accordance with MPEG4 data stream. MPEG4-standard is inherently a highly compression video algorithm. One of ordinary skill in the art would have recognized that sub-information could be compressed to occupy lesser transmission bandwidth. Furthermore, Ito et al. teaches that MPEG4 data stream has been standardized in recent years and has very high transmission efficiency.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakano et al. U.S. Patent 5,568,278 discloses "Image Data Coding And Decoding Method And Apparatus with A Plurality of DCT's, Quantizers, And VLC's".

Itokawa U.S. Patent 6,721,360 discloses "Image Processing Apparatus And Method".

Katata et al. U.S. Patent 6,324,215 B1 discloses "Motion Picture Coding And Decoding Apparatus".

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KCT

Phanhcong Tran

06/24/2005

Examiner KHANH TRAN